



National Aeronautics and Space Administration

## Information on data subsets of LTER Sites from the MODIS sensor of the Terra and Aqua satellites.

The MODIS Subset data provide summaries of selected MODIS Land Products for validation of models and remote sensing products and to characterize field sites. The fixed subsets are pixel values of land products for a 7-km x 7-km area centered on field site locations. Subsets from LTER sites as well as other projects are available from the NASA Distributed Active Archive Center at the Oak Ridge National Laboratory.

A description of the dataset at the ORNL DAAC is available at: <http://www.modis.ornl.gov/modis>

Fixed subsets for LTER sites (select Network - LTER) is available at: [http://daac.ornl.gov/cgi-bin/MODIS/GR\\_col5\\_1/mod\\_viz.html](http://daac.ornl.gov/cgi-bin/MODIS/GR_col5_1/mod_viz.html)

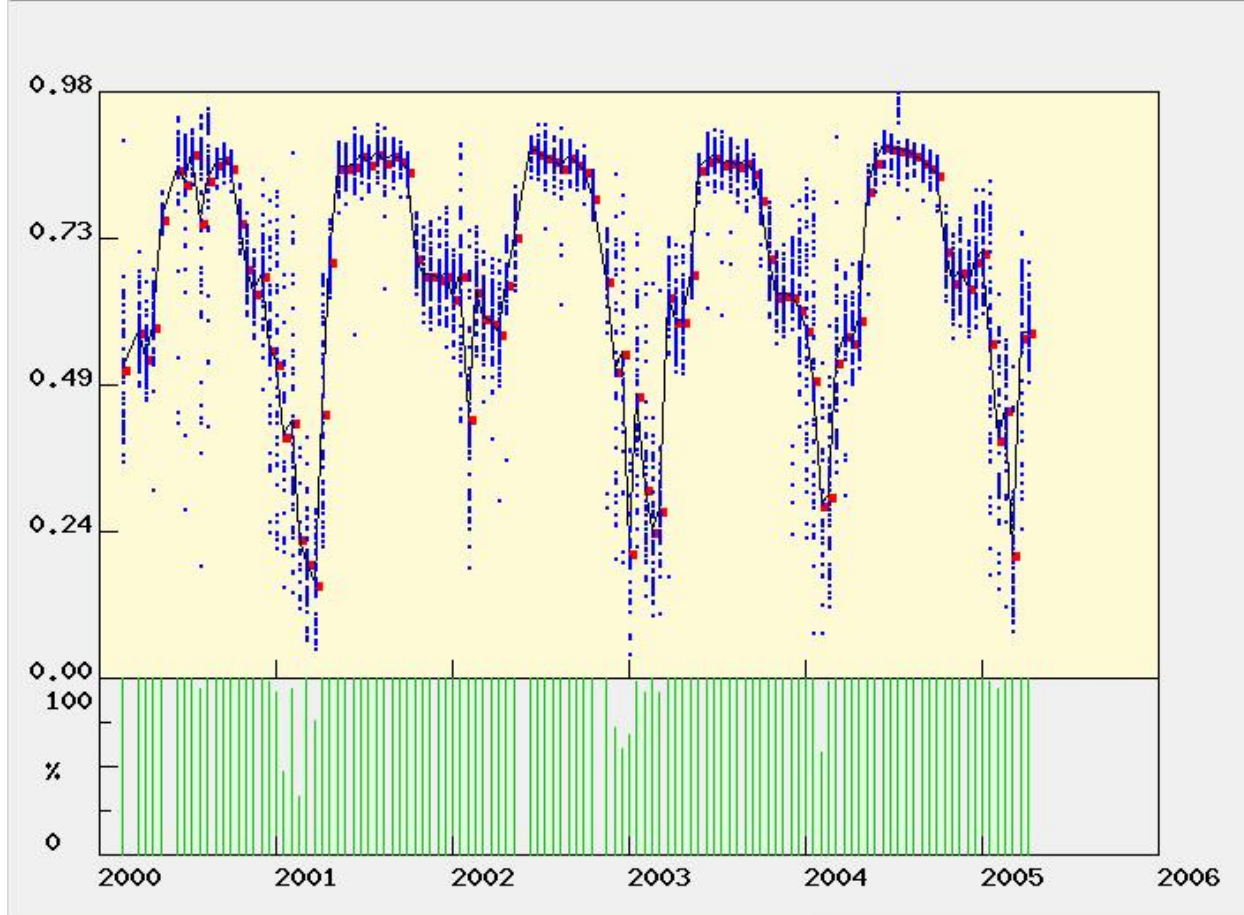
### An example of subset of data available:

MODIS Product	Terra			Aqua			Terra and Aqua		
	Visualization		Data Download	Visualization		Data Download	Visualization		Data Download
	Composite Period	Time Series		Composite Period	Time Series		Composite Period	Time Series	
Surface Reflectance (M*D09A1)									
Land Surface Temperature Land Emissivity (M*D11A2)									
Land Cover (12Q1)									
Vegetation Indices (NDVI, EVI) (M*D13A2)									
Leaf Area Index/Fraction of Photosynthetically Active Radiation (LAI/FPAR) (M*D15A2)									
Gross Primary Production (GPP) Version 4.0 (M*D17A2)									
Gross Primary Production (GPP) Version 4.5 (M*D17A2)									
Net Primary Productivity (NPP) Version 4.0 (M*D17A3)									
Net Primary Productivity (NPP) Version 4.5 (M*D17A3)									
MODIS Terra BRDF and Calculated Albedo (MOD43B)									
Reflectance Nadir BRDF-Adjusted (NBAR) (MOD43B4)									

## Example of NDVI time series from MODIS data:

Site:	USA, Harvard Forest, Massachusetts [ Lat: 42.537756, Lon: -72.171478 ]
Quality Control Conditions:	As Specified by Science Team

MOD13A2 / 1\_km\_16\_days\_NDVI Collection 4 [ Scale factor = 0.0001, units = NDVI ]



## The registered locations used for the fixed subsets: LTER Site Targets for MODIS subsets.

The following is a list of LTER site locations to be used for center locations of MODIS 7x7 km subset time series. The MODIS subsets can be selected from the ORNL DAAC web page at: <http://www.modis.ornl.gov/modis/>

1.

AND - H.J. Andrews LTER AND1

Site of AERONET Sunphotometer

This site is in addition to the AND Flux tower site.

<http://www.fsl.orst.edu/lter/>

Primary Contact: [Kari O'Connell](#),

Andrews Experimental Forest P.O. Box 300

Blue River, OR 97413 USA Phone: 541-822-6303 Fax: 541-822-6329

Elevation 830m

N +44.23889            W -122.22389

2.

ARC - Arctic LTER - ARC1

Toolik Lake Station, from 2004 GPS survey

<http://ecosystems.mbl.edu/ARC/>

Primary Contact: Debbie Scanlon - [dscanlon@mbl.edu](mailto:dscanlon@mbl.edu)

The Ecosystems Center

Marine Biological Lab

7 MBL St

Woods Hole, MA 02543 USA Phone: 508 289 7496

Elevation 760m

N +68.62833    W -149.59333

3.

BES - Baltimore Ecosystem Study - BES1

Gwynns Falls Watershed - Primary Meteorological Station

<http://www.beslter.org/>

Primary Contact: [Jennifer Sullivan](#)

Baltimore Ecosystems Study  
Room 134  
TRC Building 5200 Westland Blvd  
Baltimore, MD 21227 USA Phone: 845-677-7600 X 210 Fax: 845-677-5976

Elevation 140m  
N +39.40028 W -76.77028

4.

BNZ - Bonanza Creek LTER - BNZ1

These two sites are the primary LTER sites, and should be added in addition to the 3  
"Bonanza Creek" sites already in the MODIS subset list.

BNZ Experimental Forest - AERONET sunphotometer site

<http://www.lter.uaf.edu/default.cfm>

Primary Contact: [Jamie Hollingsworth](#)

Boreal Ecology Cooperative Research Unit

901 S. Koyukuk Dr. Ste. 193

Fairbanks, AK 99775 Phone: 907.474.7470 Fax: 907.474-6251

Elevation 150m  
N +64.74278 W -148.31583

BNZ - Bonanza Creek LTER - BNZ2

BNZ Caribou Poker Creek Watershed

Elevation 600m

N +65.16667 W -147.66667

5.

CCE California Current Ecosystem - CCE1

Open Ocean site, reflectance data would be very useful

<http://cce.lternet.edu/>

Primary Contact: [Mark Ohman](#)

Scripps Institution of Oceanography

University of California, San Diego

9500 Gilman Dr.

La Jolla, CA 92093 Phone: (858) 534-2754 Fax: (858) 534-2779

Elevation 0m  
N +32.8736 W -120.2798

6.

CDR Cedar Creek Natural History Area - CDR1  
Research Station

<http://www.cedarcreek.umn.edu/>

Primary Contact: [Nancy Larson](#)

100 Ecology Building

1987 Upper Buford Circle

St. Paul, MN 55108 Phone: 612-625-5740 Fax: 612-624-6777

Elevation 270m

N +45.40093 W -93.20137

7.

CAP - Central Arizona - Phoenix Urban LTER CAP

<http://caplter.asu.edu/>

Primary Contact: [Shirley Stapleton](#)

Center for Environmental Studies

Arizona State University

PO BOX 873211

Tempe, AZ 85287-3211 USA Phone: (480) 965-2975 Fax: (480) 965-8087

Elevation 360m

N +33.42700 W -111.93300

8.\*

CWT - Coweeta LTER - CWT1

Coweeta Site (already registered)

<http://coweeta.ecology.uga.edu/>

Primary Contact: [Ted Gragson](#)

University of Georgia Institute of Ecology

Athens, GA 30606-2202 USA Phone: 706.542.5691 Fax: 706.542.6040

Elevation 960m

N +35.05058 W -83.450065

9.

FCE - Florida Coastal Everglades LTER - FCE1

<http://fce.lternet.edu/>

Primary Contact: [Daniel Childers](#)  
Florida International University  
Southeast Environmental Research Center  
University Park, OE 148  
Miami, FL 33199 U.S.A. Phone: (305) 348-6054

Elevation 1m  
N +25.46821 W -80.85328

10.  
GCE Georgia Coastal Ecosystems LTER - GCE1  
Coastal tide flat  
<http://gce-lter.marsci.uga.edu/lter/>  
Primary Contact: [Steven Pennings](#)  
Department of Marine Sciences  
University of Georgia  
Athens, GA 30602-3636 U.S.A. Phone: 706-542-5955 Fax: 706-542-5888

Elevation 2m  
N +31.42700 W -81.37100

11.\*  
HFR - Harvard Forest LTER - HFR1  
Harvar Forest Flux Tower site  
<http://harvardforest.fas.harvard.edu/>  
Primary Contact: Principal Investigator: [David Foster](#)  
Harvard Forest P.O. Box 68  
324 North Main Street  
Petersham, MA 01366 USA Phone: (978) 724-3302 Fax: (978) 724-3595

Elevation 350m  
N +42.53776 W -72.17148

12.  
HBR - Hubbard Brook LTER - HBR1  
<http://hbr.lternet.edu/>  
Primary Contact: [Timothy Fahey](#)  
Hubbard Brook - USDA Forest Service  
Northeastern Research Station  
234 Mirror Lake Road

Campton, NH 03223 Phone: 603-726-8902 Fax: 603-726-4851

Elevation 570m

N +43.93972 W -71.75139

13.\*

JRN - Jornada Basin LTER - JRN1

Site already registered for MODIS Subsets

<http://jornada-www.nmsu.edu/>

Primary Contact: Information Mgr: [Ken Ramsey](#)

New Mexico State University

Department of Biology

Box 30001/MSC 3AF

Las Cruces, NM 88003-8001 USA Phone: (505) 646-7918 Fax: (505) 646-5665

Elevation 1400

N +32.590709 W -106.844602

14.

KBS - Kellogg Biological Station LTER - KBS1

Research location and site of AERONET sunphotometer

<http://lter.kbs.msu.edu/>

Primary Contact: Information Mgr: [Sven Bohm](#)

3700 East Gull Lake Drive

Hickory Corners, MI 49060 Kalamazoo Phone: (269) 671-2359 Fax: (269) 671-2351

Elevation 293m

N +42.41333 W -85.37194

15.\*

Konza Prairie LTER - KNZ

Site is already registered for MODIS subsets at Flux tower and past AERONET location.

There is also an AERONET location listed for EDC use and that sunphotometer is about 4km northwest of these coordinates.

<http://www.konza.ksu.edu/>

Primary Contact: [John Blair](#)

232 Ackert Hall

Konza LTER Program, Division of Biology

Kansas State University

Manhattan, KS 66506-0112 Phone: 785-532-7065 Fax: 785-532-6653

Elevation 440m  
N +39.082393 W -96.560277

16.

Luquillo LTER - Luquillo Experimental Forest - LUQ1

<http://luq.lternet.edu/>

Primary Contact: [Nicholas Brokaw](#)

Natural Science Faculty U.P.R Río Piedras

Institute for Tropical Ecosystem Studies

PO Box 23341

San Juan, PR 00931-3341 USA Phone: 787-764-0000X4940 Fax: (787) 772 -1481

Elevation 400

N +18.32389 W -65.81750

17.

McMurdo Dry Valleys LTER - MCM1

Location of past installation of AERONET sunphotometer

<http://huey.colorado.edu/LTER/>

Primary Contact: [William Lyons](#)

MCM LTER Office

1560 30th Street

Institute for Arctic and Alpine Research

Campus Box 450

University of Colorado

Boulder, CO 80309-0450 USA Phone: 303-492-4639

Elevation 65m

S -77.625000      E +162.882780

18.

MCR Moorea Coral Reef LTER - MCR1

Coral Reef

<http://mcr.lternet.edu/>

Primary Contact: [Andrew Brooks](#)

Marine Science Institute

University of California

Santa Barbara, CA 93106-6150 Phone: 805 893-7670 Fax: 805 893-3777



Elevation 1m  
S -17.50100 W -149.83300

19.\*

NWT Niwot Ridge LTER - NWT1

This site is already registered as Niwot Ridge Forest for subsets at the two flux towers. The Niwot Saddle site is also registered for MODIS subset and should remain listed.

<http://culter.colorado.edu/>

Primary Contact: [Mark Williams](#)

1560 30th Street

UCB 450

Boulder, CO 80309 USA Phone: 303-492-4771 Fax: 303-492-6388

Elevation 3050

N +40.03288 W -105.54640

NWT Niwot Ridge LTER - NWT2

This site is already registered as Niwot Ridge Forest for subsets at the two flux towers.

Elevation 3050

N +40.032500 W -105.546944

20.

North Temperate Lakes LTER - NTL

The two research sites listed here should be added **in addition** to the flux tower site at Park Falls. The current location already registered for MODIS subsets ( N46.0, W-89.600000 ) for NTL1 below is imprecise and should be replaced by the coordinates listed here.

NTL – NTL1 – North Temperate Lakes LTER, Trout Lake Station

Forest site with interspersed lakes

<http://lter.limnology.wisc.edu/>

Primary Contact: [James Rusak](#)

Center for Limnology

University of Wisconsin-Madison

680 N. Park St.

Madison, WI 53706 USA Phone: 608 262 3014 Fax: 608 265 2340

Elevation 260m  
N 46.01374 W -89.67969

NTL – NTL2 – North Temperate Lakes LTER, Madison Lakes, Yahara Watershed  
Wetland and agriculture site, northeast of Lake Mendota  
Elevation 270m  
N 43.20850 W -89.35187

21.

Palmer Station LTER - PAL1 Palmer Station Anvers Island

<http://pal.lternet.edu/>

Primary Contact: [Helen Quinby](#)

Virginia Institute of Marine Science (VIMS)

College of William and Mary

Box 1346

Gloucester Point, VA 23062-1346 Phone: (804) 684-7180 Fax: (804) 684-7293

Elevation 10m  
-64.700 -64.000

22.

Plum Island Ecosystem LTER - PIE1

<http://ecosystems.mbl.edu/PIE/>

Primary Contact: [Charles Hopkinson](#)

The Ecosystems Center

Marine Biological Laboratory

Woods Hole, MA 02543 Phone: 508-289-7688 Fax: 508-457-1548

Elevation 50m  
N + 42.75900 W -70.89100

23.

Santa Barbara Coastal LTER - SBC1

<http://sbc.lternet.edu/>

Primary Contact: [Jenifer Dugan](#)

Marine Science Institute

University of California

Santa Barbara, CA 93106 Phone: 805-893-2071

Elevation 350m

N +34.495440      W -119.911820

24.\*

SEV Sevilleta LTER - SEV1

Location of research site "Mackenzie Flats" - Already Registered for MODIS subsets

<http://sev.lternet.edu/>

Primary Contact: [Joslyn Garcia-Bustamante](#)

Sevilleta LTER

Department of Biology MSC03 2020

1 University of New Mexico

Albuquerque, NM 87131-1091 U.S.A. Phone: (505) 277-6328 Fax: (505) 277-5355

Elevation 1610m

N +34.358688 W -106.669368

Bigfoot site also already registered.

25.

Shortgrass Steppe - SGS - SGS1

<http://sgs.cnr.colostate.edu/>

Primary Contact: [Sallie Sprague](#)

Dept. of Soil and Crop Sciences

College of Agricultural Sciences

Colorado State University

Fort Collins, CO 80523-1170 Phone: 970-491-2366 Fax: 970-491-2156

Elevation 1538m

N40.80784 W104.18793

26.\*

VCR Virginia Coast Reserve LTER - VCR1

Site already registered for MODIS subsets

Virginia Coast Reserve LTER Flux tower site

<http://www.vcrlter.virginia.edu/>

Primary Contact: [Karen McGlathery](#)

University of Virginia Department of Environmental Sciences

291 McCormick Road

P.O. Box 400123

Charlottesville, VA 22904-4123 Phone: 434-924-0558 Fax: 434-982-2137

Elevation 2

N +37.42005 W -75.70000

\* Sites marked with an asterisk are already registered in the existing MODIS subset list and require no modification.

Notes:

These locations were compared to existing MODIS subset list (looking for duplicates, imprecise locations etc.). A number of LTER sites have additional subset sites for specific NASA projects. These locations are in addition to those listed here.

For coastal sites, primary meteorological stations or primary research sites sufficiently inland to prevent subsetting a partial land/water area were used here. The exception to this is the VCR flux tower site already registered. This VCR location - the flux tower - already registered for MODIS subsets will include water and is also subject to tides.

Many of the research site locations included here are the center location of high resolution "GFL" reconnaissance data for which LTER has been previously registered.

Locations for Palmer Station and McMurdo are included although MODIS data may not be generally available because of the high latitude. The MCR and CCE sites have also been included. Reflectance data would be quite useful for these sites although they probably don't fall under the purview of the ORNL DAAC...